Attorney's Docket No.: 06317-038002

Applicant: Donald W. Petersen et al.

Serial No.: 09/915,997 Filed: July 26, 2001

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Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-30. (canceled)

- 31. (previously presented) A bone graft substitute composition, consisting of: calcium sulfate hemihydrate;
- a mixing solution; and
- a plasticizing substance.
- 32. (previously presented) The composition of claim 31, wherein the plasticizing substance comprises a cellulose derivative.
- 33. (previously presented) The composition of claim 31, wherein the plasticizing substance is selected from a group consisting of sodium carboxymethylcellulose, methylcellulose, hydroxypropyl methyl cellulose, hydroxypropyl cellulose, ethylcellulose, hydroxyethylcellulose, and cellulose acetate butyrate.
- 34. (previously presented) The composition of claim 31, wherein the plasticizing substance comprises hydroxypropyl methyl cellulose.
- 35. (previously presented) The composition of claim 31, wherein the plasticizing substance comprises hydroxypropyl cellulose.
- 36. (previously presented) The composition of claim 31, wherein the plasticizing substance comprises hyaluronic acid.
- 37. (previously presented) The composition of claim 31, wherein the plasticizing substance comprises methylcellulose.
- 38. (previously presented) The composition of claim 31, wherein the mixir g solution is selected from a group consisting of sterile water, inorganic salt, and cationic surface active agent.

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39. (previously presented) The composition of claim 38, wherein the cation a surface active agent is selected from a group consisting of sodium chloride, phosphate buffered saline, potassium chloride, sodium sulfate, ammonium sulfate, ammonium acetate, and sodium acetate.

- 40. (previously presented) The composition of claim 31, wherein the mixing solution comprises sterile water.
 - 41. (previously presented) The composition of claim 31, consisting of: 100 parts by weight of the calcium sulfate hemihydrate; about 1.5 to about 8 parts by weight of the plasticizing substance; and
 - about 25 to about 65 parts by weight of the mixing solution.
 - 42. (previously presented) The composition of claim 31, consisting of: 100 parts of the calcium sulfate hemihydrate;
 - about 5.25 parts by weight of the plasticizing substance; and about 33.6 parts by weight of the mixing solution.